

ings should vary, the position of the clamping bushing could

easily be changed.

The work is properly located by the inner ends of the three guide bushings a , h , and a , and also by the locating screws l against which the casting is held by knurled thumb screws m and n . When the holes a and b are being drilled, the jig is placed with the cover side down, as shown at A in Fig. 5, and the drill is guided by removable bushings, one of which is shown at r . When the drilling is completed, the drill bushings are replaced by reamer bushings and each hole is finished by reaming. The small hole c , Fig. 4, is drilled in the end of the casting by simply placing the jig on end as shown at l , Fig. 5. Box jigs which have to be placed in more than one position for drilling the different holes are usually provided with feet or extensions, as shown, which are accurately finished to align the guide bushings properly with the drill. These feet extend beyond any clamping screws, bolts, or bushings which may protrude from the sides of the jigs, and provide a solid support. When inserting work in a jig, care should be taken to remove all chips which might have fallen upon those surfaces against which the work is clamped and which determine its location.

Still another jig of the box type, which is quite similar to the one shown at A , Fig. 4, but is arranged differently, owing to the shape of the work and location of the holes, is shown at B in the same illustration. The work has three holes in the base A , and a hole at i which is at an angle of 5 degrees with the base. The three holes are drilled with the jig standing on the opposite end y , and the angular hole is drilled while the jig rests on the four feet k the ends of which are at such an angle with the jig body that the guide bushing for hole l is properly aligned with the drill. The casting is located in this jig by the inner ends of the two guide bushings w and the bushing o and also by two locating screws p and a side locating screw q . Adjustable screws t and h in the cover hold the casting down, and it is held laterally by the two knurled thumb-screws u and v . If an attempt were made to drill this particular part without a jig (as would be done if only a few castings